

### **REMARKS**

Applicant would like to thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office Action, and amended as necessary to more clearly and particularly describe the subject matter which Applicant regards as the invention.

The specification was objected to for informalities. Applicants respectfully point out that the specification was previously amended to correct the informalities by a substitute specification submitted in Applicants' "Amendment 'A'" filed October 4, 2004.

Claims 2, 10 and 11 were rejected under 35 U.S.C. 112, second paragraph for lack of proper antecedent basis. Claims 2, 10 and 11 have been cancelled by amendment herein, rendering the rejection moot.

Claims 1–4 and 7–13 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,800,156 to Kahlke et al. (hereinafter "Kahlke") in view of JP 08-28822 (hereinafter "JP '822") and U.S. Patent No. 4,608,012 to Cooper (hereinafter "Cooper"). Claims 2, 7, 10, 11 and 13 have been cancelled by amendment herein. Claim 1 has been amended add additional limitations that better distinguish from the prior art. For the following reasons, the rejection has been rendered moot by the amendment.

Regarding amended claim 1, neither Kahlke, JP '822, nor Cooper, nor any combination thereof, teaches or suggests "second surface areas being impermeable by said gaseous fuel, wherein said *second surface areas are formed by sealing parts of a completely permeable surface*," as now required. Kahlke discloses assembling segments of different materials to provide area that are gas-permeable and other areas that are gas-impermeable (see column 3, lines 41–49). Similarly, regarding claim 12, none of the cited references teaches or suggests "manufacturing a planar form from a heat-resistant material permeable to the fuel; and *sealing*

*the planar form in a given region,”* as required. Unlike the claimed invention, JP ‘822 does not teach providing a permeable surface and then sealing areas that are to be gas-impermeable. Instead, JP ‘822 discloses providing a large number of scattered flame holes (31) in a burner element (3) only in areas where gas permeability is desired (see Figs. 1–3). Cooper discloses a burner element formed of a gas-permeable ceramic foam plaque (7). The burner of Cooper does not have any gas-impermeable surfaces, aside from the metal tray box (1), which supports the plaque (7). Therefore, even if the teachings of Kahlke, JP ‘822 and Cooper were combined, the “sealing” limitation of claims 1 and 12 would not be taught by the resulting combination.

Further, for the following reasons, the claimed “sealing” feature required by claims 1 and 12 is not merely a matter of design choice. According to the claimed invention, in a first step a body (or plate) of foam ceramics is provided, which is permeable over the complete surface. Subsequently, impermeable surface areas are formed by sealing parts of the completely permeable surface. One advantage of this construction, as compared to the prior art, is the simplification of the manufacturing process. According to the claimed invention, unlike with Kahlke, it is unnecessary to assembly different pieces of material together, which also decreases the risk of forming gaps between the pieces that would lead to leakage and hot spots. A further advantage of the claimed invention, as compared to the prior art, is that the complete body of foam ceramics is permeable from the bottom to the top of the body, even below the sealed areas. Of course, the gas can only leave the body through the non-sealed surface areas. However, due to the permeability within the body, it is not necessary to provide connections between the non-sealed areas (i.e. between the burner surfaces).

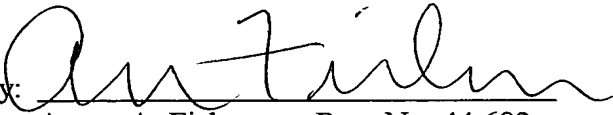
For all of the above reasons, every limitation of the claims is not taught or suggested by Kahlke, JP ‘822 or Cooper, or any combination thereof. Therefore, claims 1 and 12 are

patentable over the prior art of record. Further, since claims 3, 4, 8, 9, 14 and 15 depend from claims 1 and 12, respectively, they are patentable for the same reasons.

In light of the foregoing, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. 35878.

Respectfully submitted,  
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